

DC Compact Switch-Disconnecter

- Rated current 800 ~ 1600A
- Rated operational voltage:
 - DDH type (3P: 750Vdc, 4P: 1200Vdc)
 - DDV type (3P: 1000Vdc, 4P: 1500Vdc)
- Rated short-time current (I_{cw}): 50kA/1s
- Operation durability without maintenance: 12,500 times
- Various control power sources
- Various accessories
- Application Standards and Certification: IEC 60947-3 (DEKRA CB certification), GB 14048.3 (CCC certification)



Fixed type

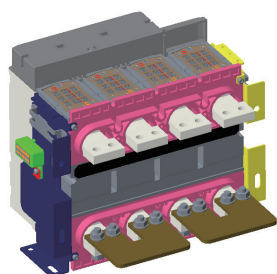


Drawable type

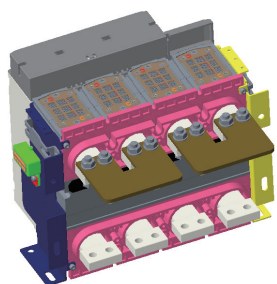
Type and ratings

Commonness														
Rated insulation voltage (U _i)	(V)	1500												
Rated impulse withstand voltage (U _{imp})	(kV)	12												
Rated operational voltage (U _e)	(V)	750V DC (3P), 1200V DC (4P)				750V DC (2P)				1000V DC (3P), 1500V DC (4P)				
Number of poles	(P)	3, 4				2				3, 4				
Installation type		Fixed / Draw-out				Fixed				Fixed / Draw-out				
Related standards		IEC 60947-3 (DEKRA CB certification), GB 14048.3 (CCC certification)				IEC 60947-3				IEC 60947-3 (DEKRA CB certification), GB 14048.3 (CCC certification)				
Type	DDH				DDV				DDV					
	DDH-08C	DDH-10C	DDH-13C	DDH-16C	DDV-08C	DDV-10C	DDV-13C	DDV-16C	DDV-08C	DDV-10C	DDV-13C	DDV-16C		
Ampere frame (AF)	800AF	1000AF	1250AF	1600AF	800AF	1000AF	1250AF	1600AF	800AF	1000AF	1250AF	1600AF		
Utilization category (According to IEC 60947-3)	DC-22A				DC-22A				DC-23A					
Rated making capacity (I _{cm})	(kA peak)	50				50				50				
Rated short-time withstand current (I _{cw})	(kA/1s)	50				50				50				
Operation time (ms)	Opening time	Less than 25ms under I _{cw} /Less than 75ms over I _{cw}												
	Closing time	80ms under												
Connection	Horizontal type	○				○				○				
	Vertical type	● (Default)				● (Default)				● (Default)				
Mechanical and electrical life cycle														
Endurance (times) (Without maintenance)	Mechanical (120 times/hr)	12,500												
	Electrical (L/R 2ms) (30 times/hr)	2,000	1,000	500	500	2,000	1,000	500	500	4,000	2,000	1,000	1,000	
Dimension and weight														
Weight (3P/4P)	Draw-out	Without cradle	15.5(3P) / 19(4P)				-				15.5(3P) / 19(4P)			
		With cradle	22(3P) / 26(4P)				-				22(3P) / 26(4P)			
	Fixed	15.5(3P) / 19(4P)				14(2P)				15.5(3P) / 19(4P)				
External dimensions (W×H×D)	Draw-out	361.3×267×255.4(3P), 361.3×267×326(4P)				-				361.3×267×255.4(3P), 361.3×267×326(4P)				
	Fixed	283×219.5×272.4(3P), 283×219.5×342.4(4P)				283×219.5×272.4(2P)				283×219.5×272.4(3P), 283×219.5×342.4(4P)				

Product connection



Upper Supply



Lower Supply

Operation voltage and connection diagram of DC ACB series

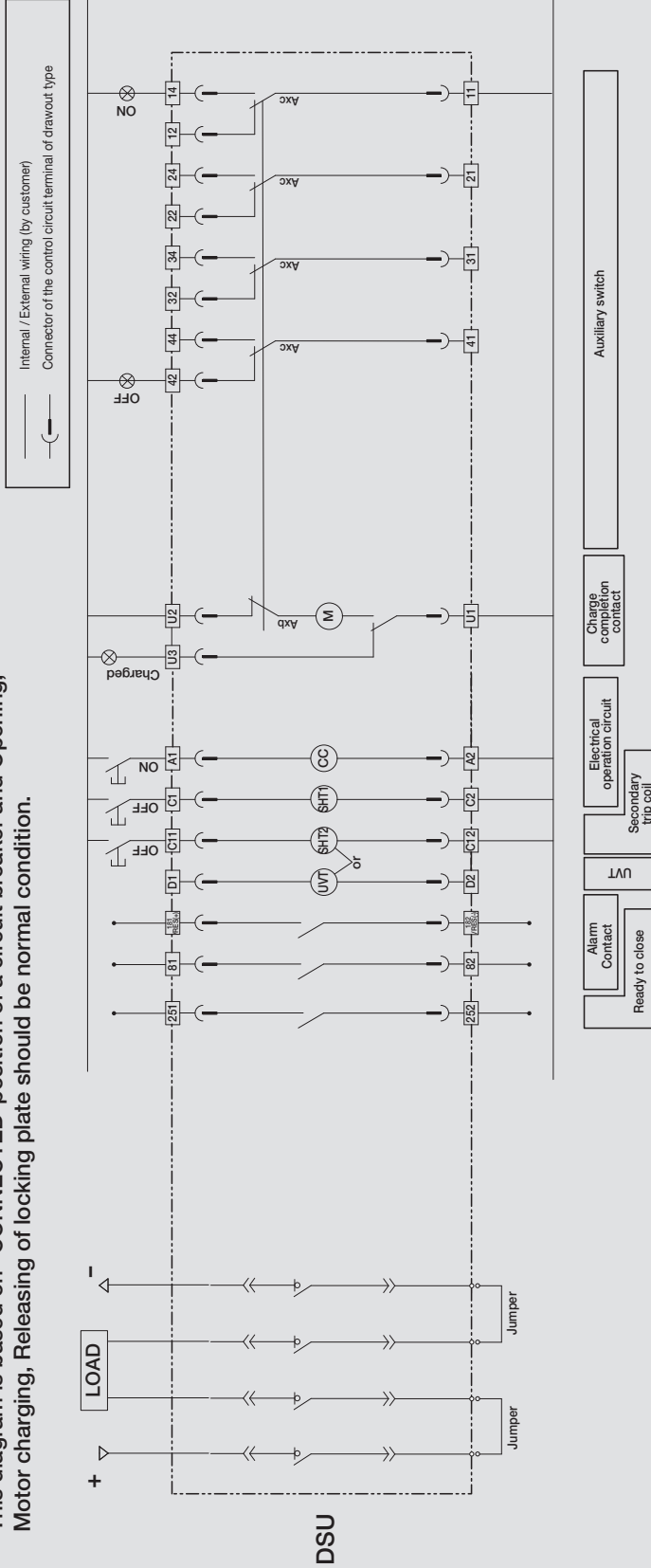
Poles	3P	3P	4P
DDH type	500 Vdc	750 Vdc	1200 Vdc
DDV type	500 Vdc	1000 Vdc	1500 Vdc
Connection diagram			

Note) If different circuit configurations are needed, please contact LS.

Type	Rated current	Busbar connection	Order code	Edifice	Order quantity	Weight (kg/set)
Fixed / Draw-out type	800-1600A	Vertical / Horizontal	70223472600	Short busbar : 1ea/unit, Heatsink : 1ea/unit M10 Bolt Set : 4ea/unit, M6 Bolt: 4ea/unit M4 Screw : 1ea/unit	3P : 1 unit 4P : 2 unit	2kg/unit
Fixed type	800~1000A	Front	70223472603	Short busbar : 1ea/unit M10 Nut Set : 4ea/unit	3P : 1 unit 4P : 2 unit	0.6kg/unit
				Short busbar : 1ea/unit, Heatsink : 1ea/unit M10 Nut Set : 4ea/unit, M6 Bolt: 2ea/unit	3P : 1 unit 4P : 2 unit	
Fixed type	1250A	Front	70223472601	Short busbar : 1ea/unit, Heatsink : 1ea/unit M10 Nut Set : 4ea/unit, M6 Bolt: 2ea/unit	3P : 1 unit 4P : 2 unit	0.7kg/unit
Fixed type	1600A	Front	70223472602	Short busbar : 1ea/unit Heatsink : 1ea/unit, Barrier Pad : 1ea/unit M10 Nut Set : 4ea/unit, M6 Bolt: 4ea/unit	3P : 1 unit 4P : 2 unit	5kg/unit

Control circuit diagram

This diagram is based on "CONNECTED" position of a circuit breaker and Opening, Motor charging, Releasing of locking plate should be normal condition.



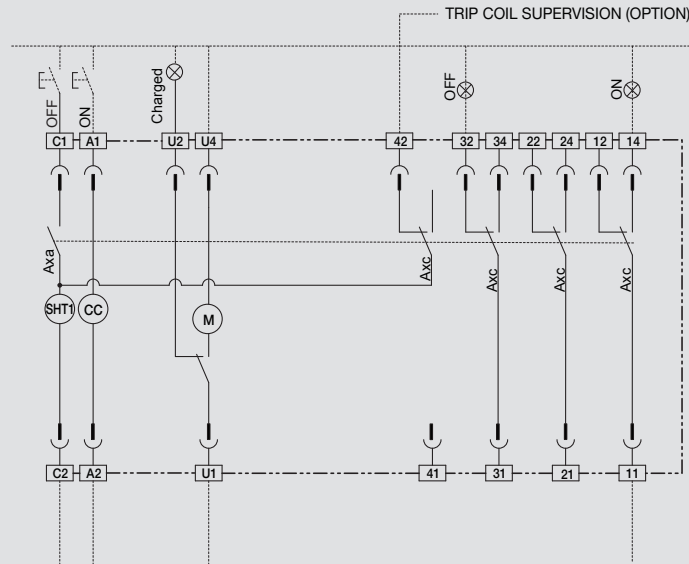
Terminal code description

Terminal	Description
11 12 ~ 41 42	Auxiliary switch "b" contact
11 14 ~ 41 44	Auxiliary switch "a" contact
U1 U3	Charge completion signal
U1 U2	Motor charging
A1 A2	Closing coil
C1 C2	Shunt trip
C11 C12	2nd shunt trip

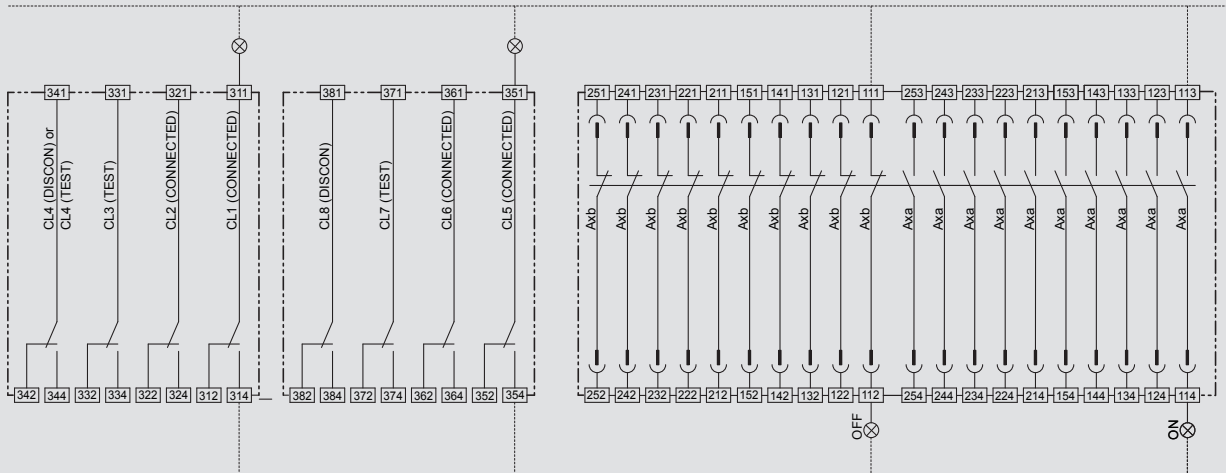
Accessory code description

Accessory Code	Description
Axc	Auxiliary switch
CL1~CL4	Cell switch
(M)	Motor
(CC)	Closing coil
(SHT1)	1st Shunt coil
(SHT2)	2nd Shunt coil
(UVT)	UVT coil

- Note: 1. The diagram is shown with circuit de-energized, all devices open and charged and relays in normal position
 2. Relay is normal condition and charging type is "Off-Charging"
 3. The standard of auxiliary contact is 4C.
 4. Option
 5. Contact configuration for Cell Switch can be changeable if necessary



Electrical operation circuit Charge completion contact Auxiliary switch



Cell switch 4C Cell switch 8C (4C Addition) MOC (Mechanical Operated Cell switches)

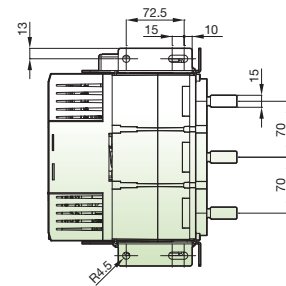
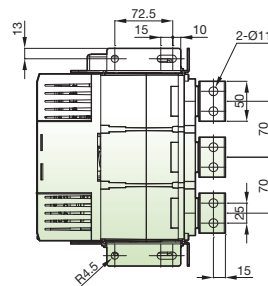
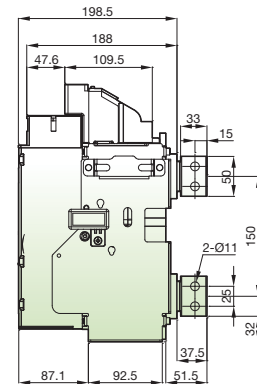
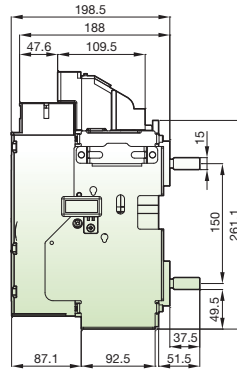
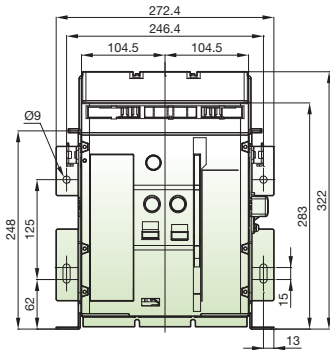
Terminal symbol

311 ~ 344	Cell switch
111 ~ 254	MOC

Dimensions

• 3P [Fixed H: Horizontal type / V: Vertical type]

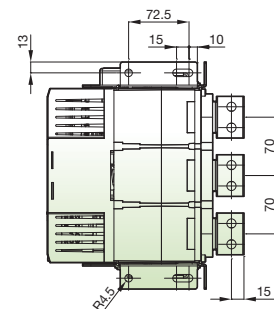
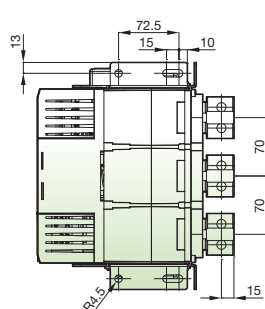
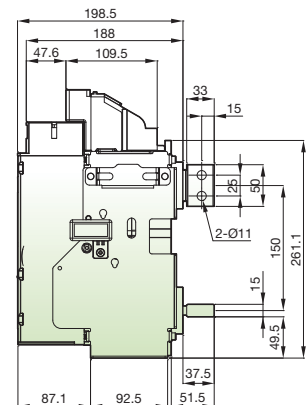
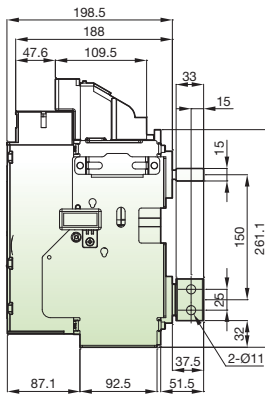
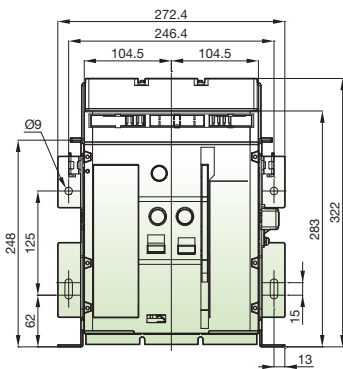
(Unit : mm)



H Type (Horizontal type)

V Type (Vertical type)

• 3P [Fixed M: Upper-Horizontal type, Lower-Vertical type / N: Upper-Vertical type, Lower-Horizontal type]



M Type

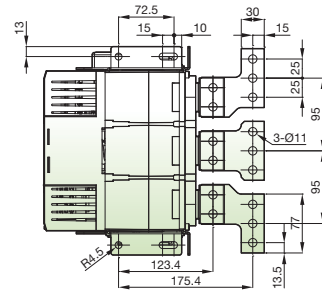
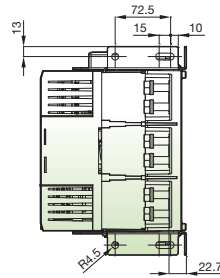
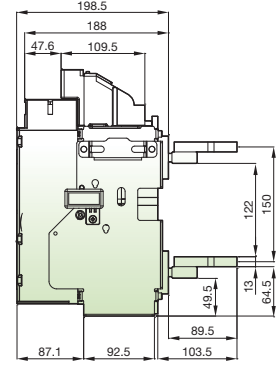
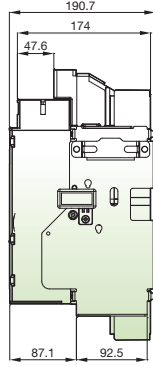
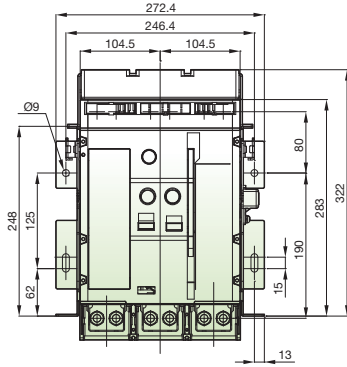
(Upper-Horizontal type, Lower-Vertical type)

N Type

(Upper-Vertical type, Lower-Horizontal type)

• 3P [Fixed P: Flat type / R: Spread type]

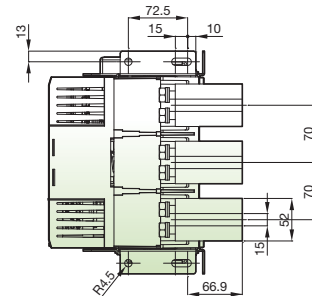
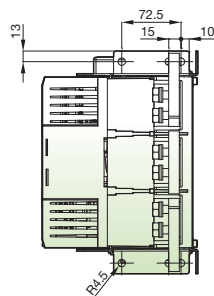
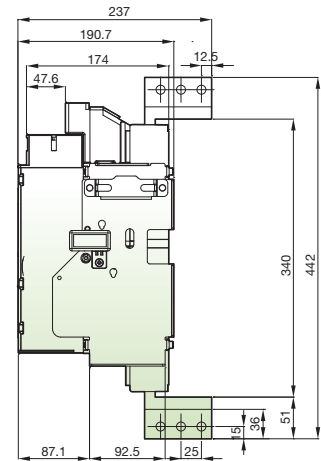
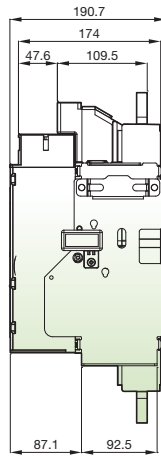
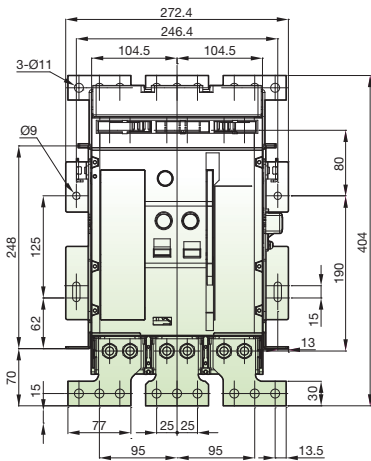
(Unit : mm)



P Type (Plane type)

R Type (Spread type)

• 3P [Fixed Z: Flat spread type / T: Flat vertical type]



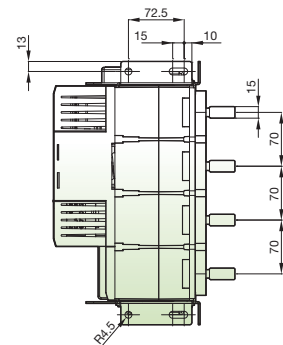
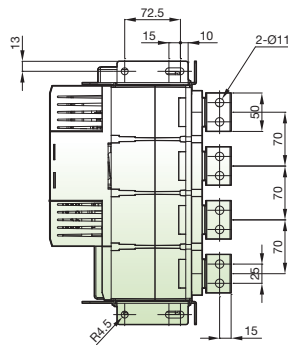
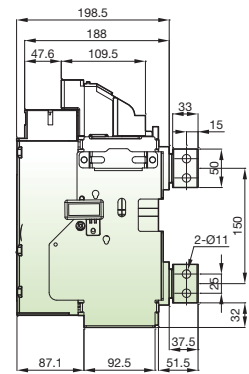
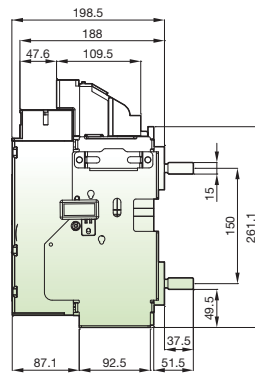
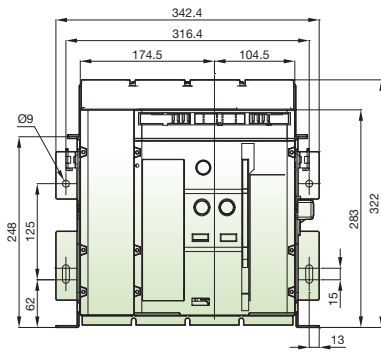
Z Type (Plane spread type)

T Type (Plane vertical type)

Dimensions

• 4P [Fixed H: Horizontal type / V: Vertical type]

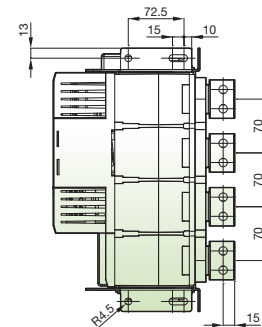
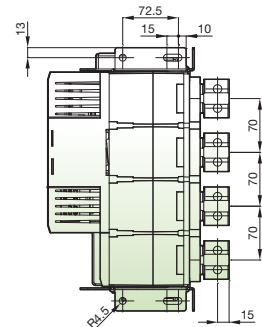
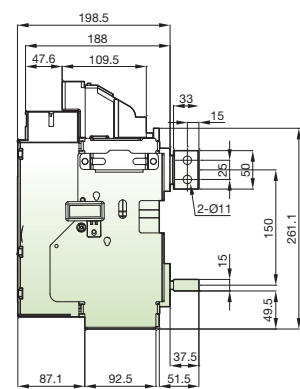
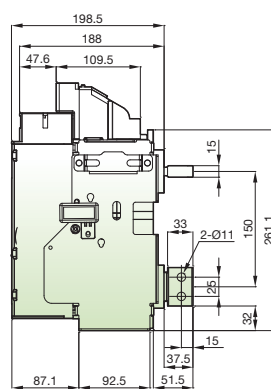
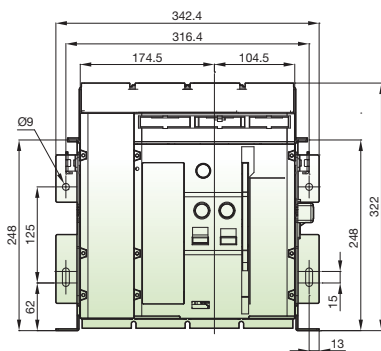
(Unit : mm)



H Type (Horizontal type)

V Type (Vertical type)

• 4P [Fixed M: Upper-Horizontal type, Lower-Vertical type / N: Upper-Vertical type, Lower-Horizontal type]

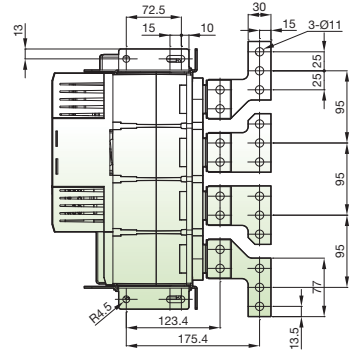
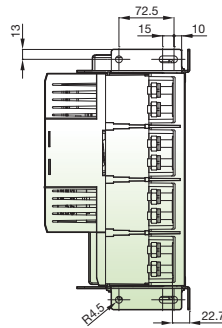
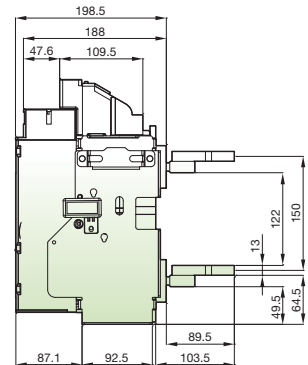
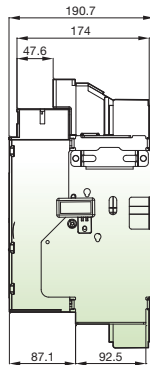
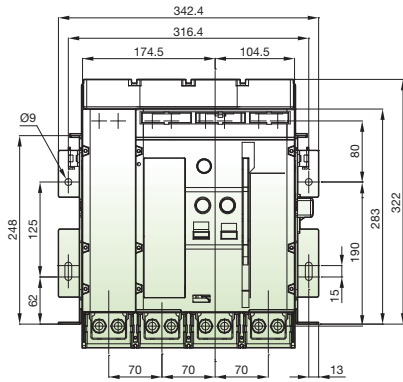


M Type
(Upper-Horizontal type, Lower-Vertical type)

N Type
(Upper-Vertical type, Lower-Horizontal type)

• 4P [Fixed P: Flat type / R: Spread type]

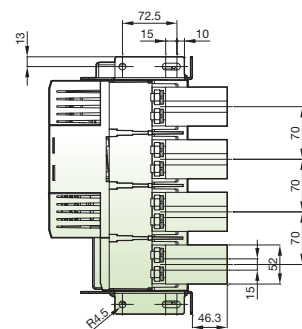
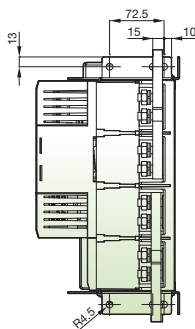
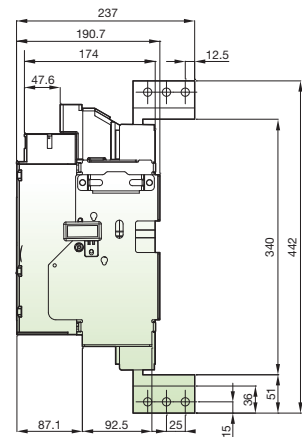
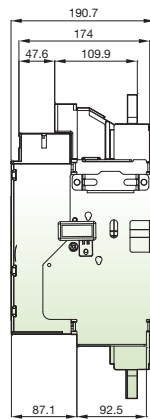
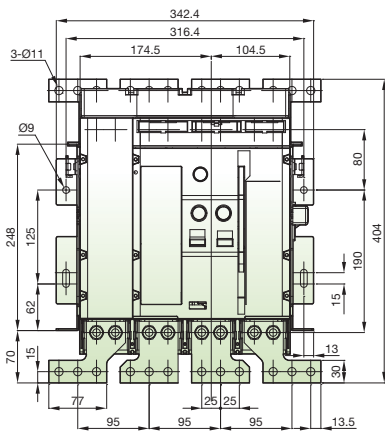
(Unit : mm)



P Type (Plane type)

R Type (Spread type)

• 4P [Fixed Z: Flat spread type / T: Flat vertical type]



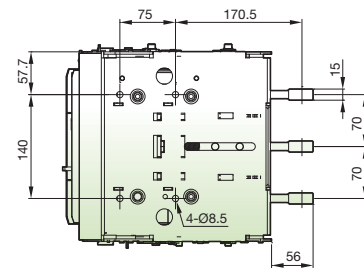
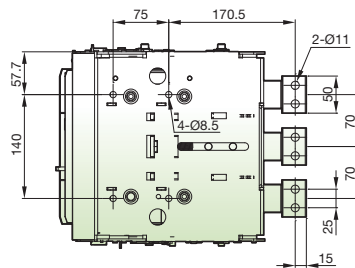
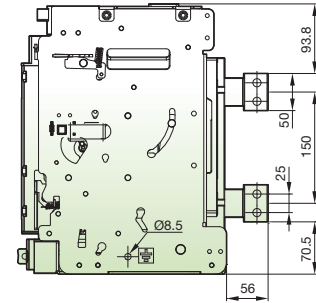
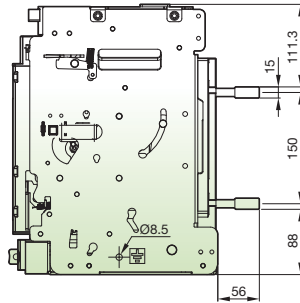
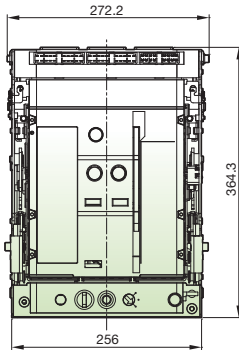
Z Type (Plane spread type)

T Type (Plane vertical type)

Dimensions

• 3P [Draw-out H: Horizontal type / V: Vertical type]

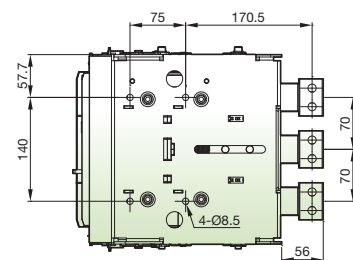
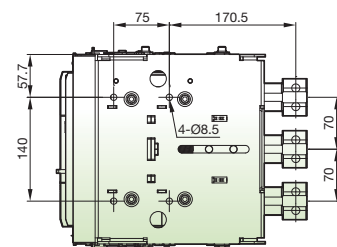
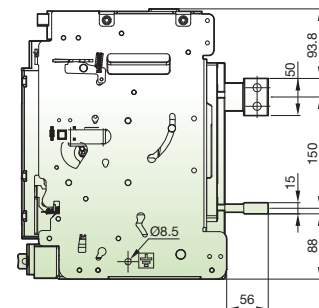
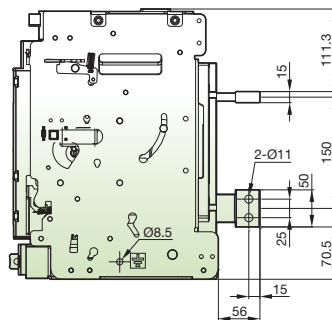
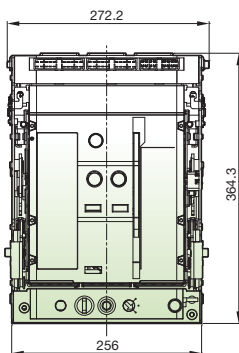
(Unit : mm)



H Type (Horizontal type)

V Type (Vertical type)

• 3P [Draw-out M: Upper-Horizontal type, Lower-Vertical type / N: Upper-Vertical type, Lower-Horizontal type]

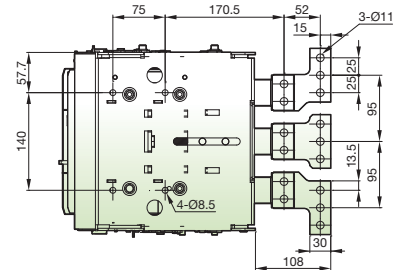
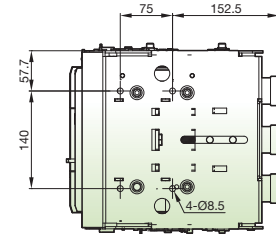
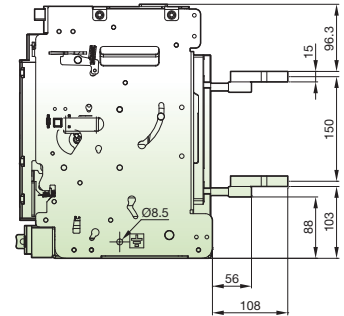
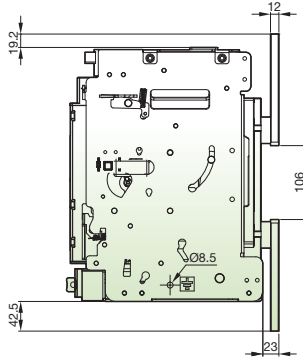
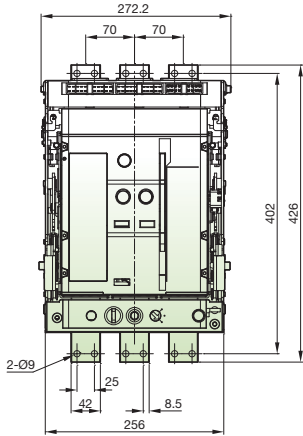


M Type
(Upper-Horizontal type, Lower-Vertical type)

N Type
(Upper-Vertical type, Lower-Horizontal type)

• 3P [Draw-out P: Flat type / R: Spread type]

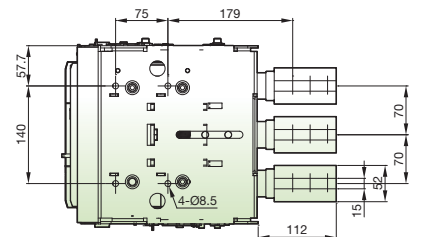
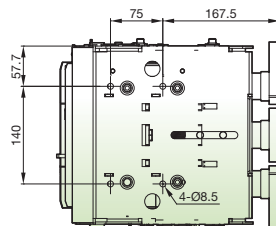
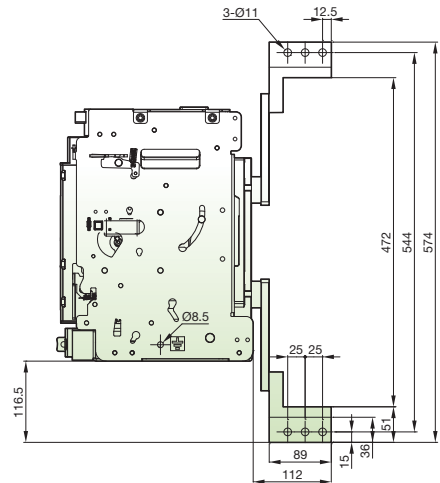
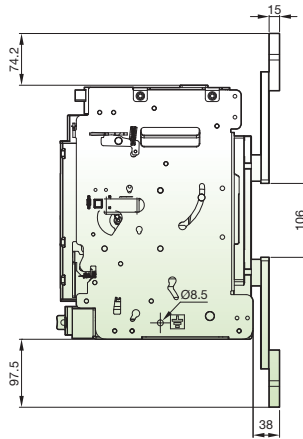
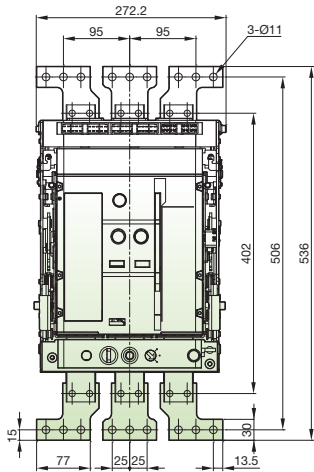
(Unit : mm)



P Type (Plane type)

R Type (Spread type)

• 3P [Draw-out Z: Flat spread type / T: Flat vertical type]



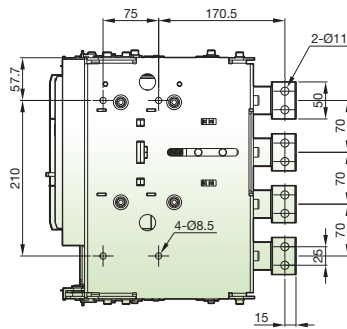
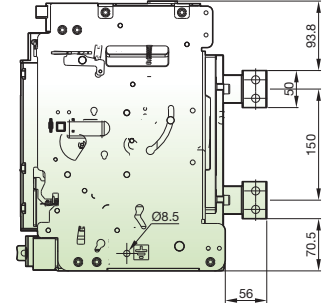
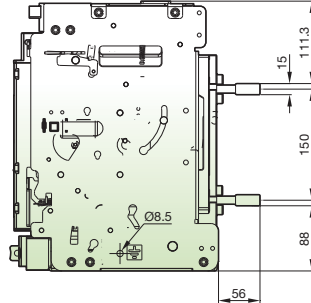
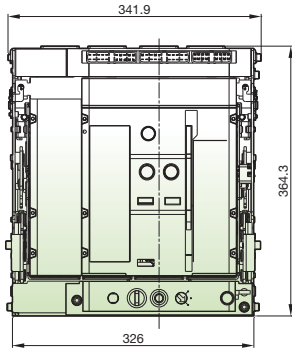
Z Type (Plane spread type)

T Type (Plane vertical type)

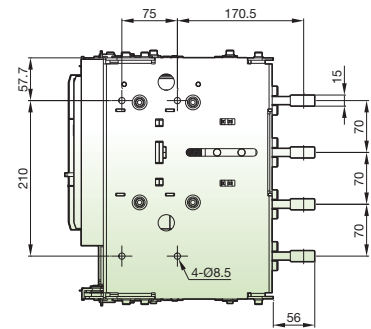
Dimensions

• 4P [Draw-out H: Horizontal type / V: Vertical type]

(Unit : mm)

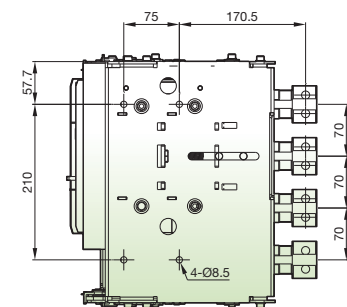
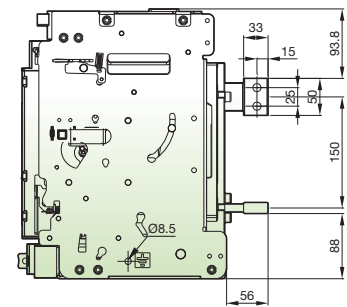
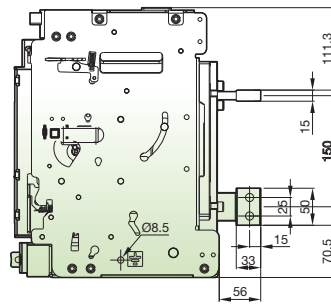
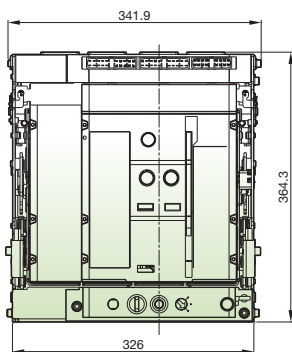


H Type (Horizontal type)

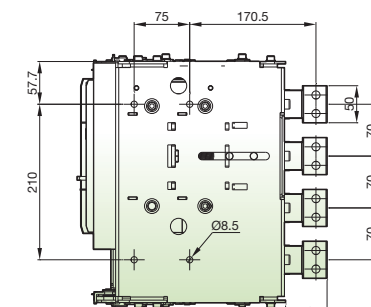


V Type (Vertical type)

• 4P [Draw-out M: Upper-Horizontal type, Lower-Vertical type / N: Upper-Vertical type, Lower-Horizontal type]



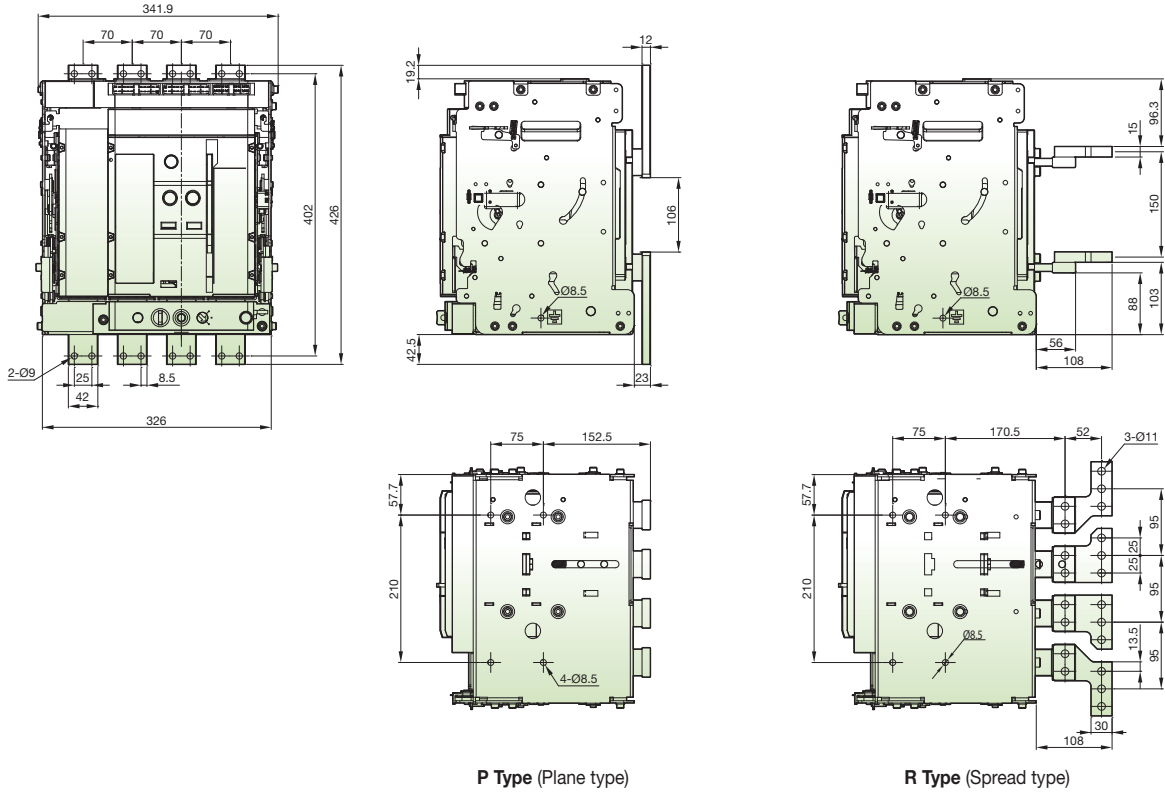
M Type
(Upper-Horizontal type, Lower-Vertical type)



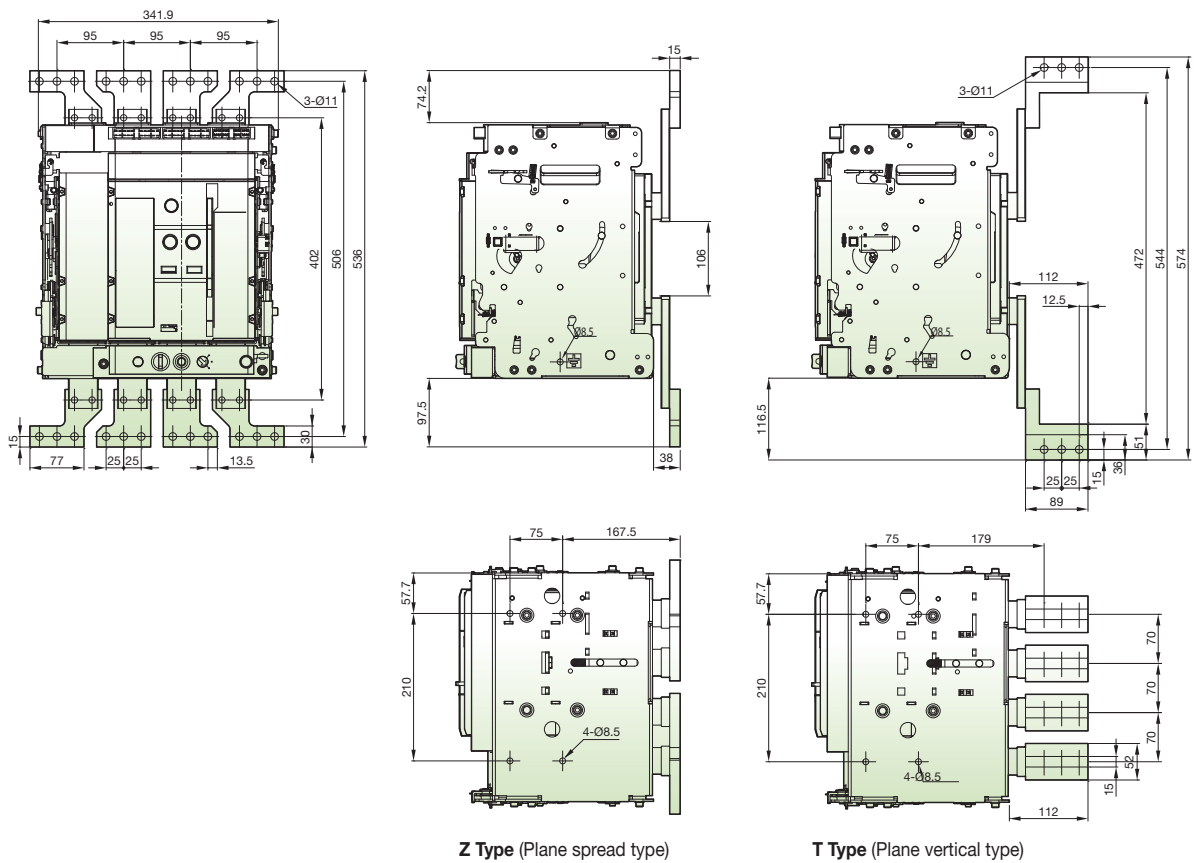
N Type
(Upper-Vertical type, Lower-Horizontal type)

• 4P [Draw-out P: Flat type / R: Spread type]

(Unit : mm)



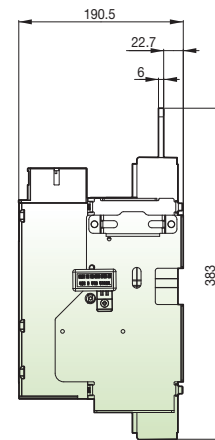
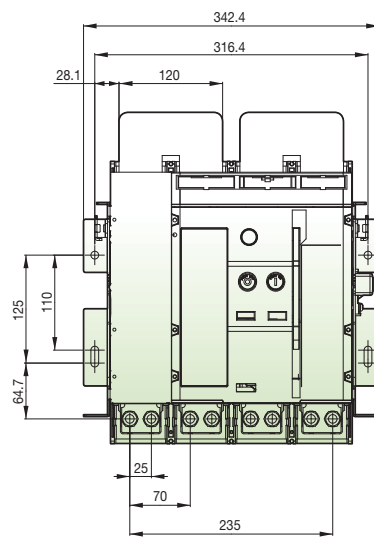
• 4P [Draw-out Z: Flat spread type / T: Flat vertical type]



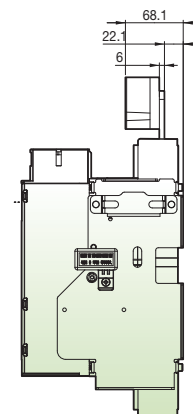
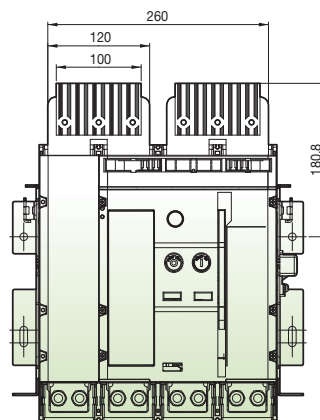
Dimensions

• 4P Plane type(P) *Fixed type(Up to 1000A)

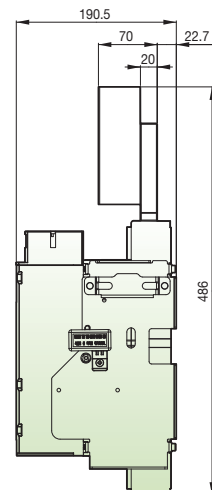
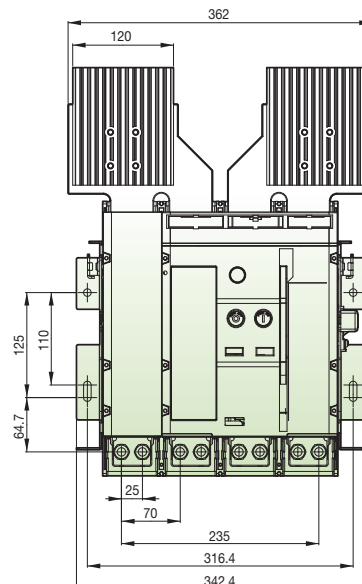
(Unit : mm)



• 4P Plane type(P) *Fixed type(Up to 1250A)



• 4P Plane type(P) *Fixed type(Up to 1600A)



• 2P Fixed Type(Up to 1600A)

(Unit : mm)

